Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently amended)   A method for reducing a size of an image of a class file, comprising:

providing a first stack map that is associated with a first bytecode of a method and a second stack map that is associated with a second bytecode of the method;

~~deriving a resulting stack map by~~ applying an operation of the second bytecode to determine an effect on the first stack map~~, the effected first stack map defining a resulting stack map~~;

comparing the resulting stack map with the second stack map; and

if the resulting stack map matches the second stack map, removing the second stack map from the class file, the removal of the second stack map operating to reduce the size of the image of the class file.

2. (Original)   The method of claim 1, wherein the second stack map is capable of being derived from the first stack map when the resulting stack map matches the second stack map.

3. (Original)   The method of claim 1, wherein the operation of the second bytecode operates on a stack.

4. (Original)   The method of claim 1, wherein each of the first and second bytecode is a computer object code.

5. (Original)   The method of claim 4, wherein each of the first and second bytecode is defined by one or more of a POP, a POP2, a DUP, a DUP2, a DUP_X1, a DUP2_X1, a DUP_X2, a DUP2_X2, an INVOKE, and a SWAP.

6. (Original)   The method of claim 1, wherein each of the first, second, and resulting stack maps is an entry that describes a state of a stack at various points of a program.

7. (Original)   The method of claim 1, wherein each of the first, second, and resulting stack maps is an entry that identifies a stack entry as an integer or an object.

8. (Original)   The method of claim 7, wherein the entry is a single bit defined by one of a zero value or a one value.

9. (Currently amended)   The method of claim 1, wherein the image is a read-only memory (ROM) image capable of being executed by a ~~Java~~ virtual machine.

10. (Original) A computer readable medium having program instructions for reducing a size of an image of a class file, comprising:

program instructions for providing a first stack map that is associated with a first bytecode of a method and a second stack map that is associated with a second bytecode of the method;

program instructions for deriving the second stack map from the first stack map by abstract interpretation of the second bytecode; and

if the second stack map is capable of being derived, program instructions for removing the second stack map from the class file, the removal of the second stack map operating to reduce the size of the image of the class file.

11. (Original) The computer readable medium of claim 10, wherein the program instructions for deriving the second stack map from the first stack map by abstract interpretation of the second bytecode includes:

applying an operation of the second bytecode to determine an effect on the first stack map, the effected first stack map defining a resulting stack map.

12. (Original) The computer readable medium of claim 11, wherein the second stack map is capable of being derived from the first stack map when the resulting stack map matches the second stack map.

13. (Original) The computer readable medium of claim 11, wherein the operation of the second bytecode operates on a stack.

14. (Original) The computer readable medium of claim 10, wherein each of the first and second bytecode is a computer object code.

15. (Currently amended)   The ~~method~~ computer readable medium of claim 14, wherein each of the first and second bytecode is defined by one or more of a POP, a POP2, a DUP, a DUP2, a DUP_X1, a DUP2_X1, a DUP_X2, a DUP2_X2, an INVOKE, and a SWAP.

16. (Original) The computer readable medium of claim 10, wherein each of the first and second stack maps is an entry that describes a state of a stack at various points of a program.

17. (Original) The computer readable medium of claim 10, wherein each of the first and second stack maps is an entry that identifies a stack entry as an integer or an object.

18. (Original) The computer readable medium of claim 17, wherein the entry is a single bit defined by one of a zero value or a one value.

19. (Currently amended)   The computer readable medium of claim 10, wherein the image is a read-only memory (ROM) image capable of being executed by a ~~Java~~ virtual machine.

20. (Currently amended)   A system for reducing a size of a class file, comprising:

    a memory for storing an abstract interpretation program module; and

    a central processing unit for executing the abstract interpretation program module stored in the memory, the abstract interpretation program module including,

program instructions for providing a first stack map that is associated with a first bytecode of a method and a second stack map that is associated with a second bytecode of the method;

program instructions for applying an operation of the second bytecode to determine an effect on the first stack map, the effected first stack map defining a resulting stack map;

program instructions for comparing the resulting stack map with the second stack map; and

if the resulting stack map matches the second stack map, program instructions for removing the second stack map from the class file, the removal of the second stack map operating to reduce the size of ~~the~~ <u>an</u> image of the class file.